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SUMMARY

of the

REPORT OF THE IN-DEPTH REVIEW OF THE NATIONAL COMMUNICATION

of

UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND

(The full text of the report (in English only) is contained in document FCCC/IDR.1/GBR)

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Summary[1]

1. The in-depth review of the national communication was carried out between September 1995 and December 1996 and included a visit to London by the team from 9 to 13 October 1995. The team included experts from Brazil, Slovakia, Switzerland and the Organisation for Economic Co-operation and Development (OECD). The United Kingdom was one of the first Parties to submit a national communication to the secretariat; it also submitted additional documentation supplementing and updating the national communication, in particular the 1995 *Progress Report on Carbon Dioxide Emissions*.

2. The United Kingdom is practically self-sufficient in energy, with considerable reserves of oil, natural gas and coal. It also has a sizeable nuclear industry, which presently accounts for about 18 per cent of the electricity generation capacity. In 1990 it had a lower-than-average level of energy use per capita compared with other OECD countries (3.7 tonnes of oil equivalent (toe) in comparison to 4.8 for OECD countries) but a slightly higher level than the average for the European Community (3.6 toe). Radical restructuring of the British economy, including privatization and liberalization of the energy sector, has been taking place since the early 1980s. Removal of subsidies in the coal industry, as well as developments in the electricity sector and in the gas market, led to a shift to natural gas for electricity generation. The mix of fuels used for electricity generation changed significantly in the United Kingdom in the period from 1990 to 1994. The share of coal declined from around 65 per cent to about 50 per cent, and that of oil from 11 to 5 per cent; the share of nuclear power increased from 21 to 29 per cent and that of natural gas from less than 1 to 13 per cent. These developments brought about substantial greenhouse gas (GHG) emission reduction benefits. The projected overall reductions in carbon dioxide (CO_2) emissions up to the year 2000 will be chiefly due to use of lower-carbon fuels, including an increase in the use of natural gas and nuclear power at the expense of coal and oil. The majority of these reductions are expected from the power sector. The original target of the United Kingdom's GHG programme set in 1994 was to return CO_2emissions in 2000 to their 1990 level by achieving a reduction of around 37,000 Gg CO_2 or 10 million tonnes (Mt) of carbon (C). Since March 1995 the United Kingdom expects to exceed this target by *reducing* its CO_2 emissions to 4 - 8 per cent (22,000 - 48,000 Gg or 6 - 13 Mt C) below 1990 levels by the year 2000.

3. In its climate change policy the United Kingdom is applying a "gas-by-gas" approach to the control of GHGs emissions and is committed to taking measures aimed at returning emissions of each of the main GHG to 1990 levels by 2000. Overall, CO_2 emissions declined in the period from 1970 to 1985. The second half of the 1980s witnessed a slight upward trend, however, with minor fluctuations. The 1990 inventory updated in October 1995 shows

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[1] In accordance with decision 2/CP.1, of the Conference of the Parties the full draft of this report was communicated to the Government of the United Kingdom, which had no further comments.

that emissions of carbon dioxide (excluding CO_2 uptakes from land-use change and forestry) in the United Kingdom totalled 577,012 Gg. In terms of 1994 global warming potentials (GWP) CO_2 accounted in 1990 for about 80 per cent of total GHG emissions. Relative inventory figures for anthropogenic emissions of CO_2 excluding land-use change and forestry for 1991-1994 in comparison to 1990 (100 per cent) are as follows: 1991 - 101 per cent, 1992 - 98 per cent, 1993 - 96 per cent, 1994 - 94 per cent, thus confirming the general downward trend in total CO_2 emissions. Total methane emissions in 1990 amounted to 4,531 Gg, with an estimated reduction of 14 per cent by 1994. Emissions of nitrous oxide (N_2O) totalled 108 Gg, carbon monoxide (CO) - 6.7 Gg, nitrous oxide (NO_x) - 2,740 Gg and non-methane volatile organic compounds (NMVOC) - 25,400 Gg. The United Kingdom largely relied on its own methods for estimation of GHG emissions and followed quite closely the Intergovernmental Panel on Climate Change (IPCC) reporting structure. The review team was of the opinion that as a whole the inventory information provided by the United Kingdom was of a high quality, transparent and consistent.

4. The team noted that at present the majority of measures implemented or planned in the United Kingdom's programme are either of the "no regrets" type or have other benefits such as raising general revenue, and reductions in GHG (especially CO_2) emissions achieved so far are mainly due to the fuel switching as a consequence of energy market liberalization. The programme, which is coordinated by the Cabinet, includes a number of policies and measures with specific emphasis on increased energy efficiency on the supply side and on energy-saving programmes on the demand side. Policies and measures implemented in accordance with the programme would allow on average additional savings of about 27,500 Gg of CO_2 emissions or about 7.5 Mt C by the year 2000. The strategy of increasing fuel duties by an average of at least 5 per cent above the inflation rate every year is an important measure to reduce CO_2 emissions. This allows motorists to respond in the most efficient and flexible way, by driving less, purchasing more fuel-efficient vehicles or adopting more economical driving styles. The team found the Energy Saving Trust to be an innovative and potentially significant mechanism for emissions reduction, subject to adequate funding of its activities. The team noted that the United Kingdom's strategy for combating climate change to a large extent depends on a partnership approach (including voluntary agreements with industry), and that monitoring climate-related activities is important taking into account that without additional measures early next century GHG emissions may start to rise.

5. Both "with measures" and "without measures" projections have been made. The results of modelling indicate that, based on the assumptions used, in each scenario projected CO_2 emissions in 2000 would not exceed their 1990 level even without additional measures listed in the climate change programme. In the period between 2000 and 2020 every scenario projects an increase in CO_2 emissions - rising significantly from 2000 to 2005, then almost levelling off and sharply rising again between 2010 and 2020. This trend reflects the fact that local reserves of natural gas may diminish, demand for energy is expected to increase and the majority of nuclear power stations will reach the end of their life soon after the year 2000.

The projections indicate that emissions of gases other than CO_2 will continue to decline (as was the case between 1990 and 1995). The United Kingdom is considering developing improved procedures for monitoring the effects of individual CO_2 abatement measures. They will depend on the type of measures and will, for example, include econometric models to assess effects of fiscal measures, feedback from industry for voluntary agreements, evaluation of results of introducing new standards, and national statistical data for combined heat and power (CHP) and renewable energy sources.

6. Changes in climate could have significant impacts in some sectors and in some regions of the United Kingdom, both of a beneficial and of an adverse nature. Research in this area will be continued with the aim of identifying possible adaptation measures in potentially vulnerable sectors and areas. The United Kingdom has not implemented specific adaptation measures so far but response strategies are investigated as part of the impact assessment apart from MAFF's measures to protect the UK coastline.

7. The United Kingdom contributed fully to the Global Environment Facility, both at the pilot phase and for the replenishment, and has specific strategies for environmental assistance, including climate change. The United Kingdom has committed a total of £130 million to the Facility, and is the fifth largest donor. Transfer of technology and know-how is a central element in most aid projects. The United Kingdom particularly acknowledges the role of the private sector in technology transfer and has set up a "technology partnership initiative" to facilitate such transfer.

8. The team felt that the United Kingdom has to be commended for the scope and quality of both national and international climate change research. In addition to research on inventories methodology, renewable energy sources, mitigation options and impact assessment, a comprehensive climate research programme is under way. The United Kingdom provided technical support units that facilitated preparation of the IPCC Report on Radiative Forcing and the IPCC Guidelines for National Greenhouse Gas Inventories. It finances the activities of the technical support unit of Working Group I of the IPCC, which is responsible for the science of climate change. According to estimates, the United Kingdom spent about £200 million on climate change research in 1993/94.

9. Some £130 million have been spent on energy and fuel efficiency awareness and advice programmes since 1990. Targeted groups include specific sectors of the economy, consumers, non-governmental organizations and households. The Environment and Energy Management Directorate's Best Practice Programme is the Government's main programme for dissemination of information on cost-effective energy efficiency measures. The Government recognizes the need for a body to coordinate and promote the teaching of energy efficiency in schools. It considers that the Centre for Research, Education and Training in Energy (CREATE) is best placed to carry out this role and has increased support for its activities. Many environmental groups provide information on the greenhouse effect and the

environmental consequences of energy use to individuals. Industry non-governmental organizations play an important role in concluding and implementing voluntary agreements which constitute an essential part of the United Kingdom's climate change policy.